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BY HAND

Docket Coordinator
CERCLA Docket Office
United States Environmental Protection Agency
1235 Jefferson Davis Highway
Crystal Gateway #1, First Floor
Arlington, VA 22202

Re: Comments on the Proposed Listing of Sauget Area 2, in Sauget, Cahokia, and East St. Louis, Illinois on the CERCLA National Priorities List

Dear Docket Coordinator:

These comments are submitted by Pharmacia Corporation and Solutia Inc. ("Solutia"), in its own capacity and in its capacity as Pharmacia's attorney-in-fact,[1] Cyprus AMAX Minerals Company ("Cyprus AMAX"), Chemical Waste Management, Inc. ("Chemical Waste Management"), and Ethyl Corporation and Ethyl Petroleum Additives, Inc. ("Ethyl") (collectively, "commenters") in response to the proposal by the United States Environmental Protection Agency ("EPA") to list the Sauget Area 2 sites[2] on the National Priorities List ("NPL"). *See* 66 Fed. Reg. 47,612 (Sept. 13, 2001).[3] Sauget Area 2 comprises an aggregation of five disparate sites totaling about 312 acres in Sauget, East St. Louis, and Cahokia, Illinois. Accompanying the proposal to list the

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[1] The company formerly known as "Monsanto Company" is today known as "Pharmacia Corporation." Pharmacia Corporation was formed in 2000 by the merger of Monsanto, and Pharmacia & Upjohn, Inc. Effective September 1, 1997, the former Monsanto Company divided into two separate publicly held companies. At the spinoff, the previous division of Monsanto which operated the non-agricultural chemical businesses essentially became what is now Solutia Inc.

[2] There are five sites included in the proposed Area 2 listing: each site is identified with both a number (1-5) and by a letter (O, P, Q, R, and S). These comments will use the letter designator.

[3] These comments are submitted within the extended comment period granted to Solutia and the other commenting entities by EPA. *See* Letter from D. Evans (EPA) to L. Tape (Thompson Coburn, LLP) (Oct. 17, 2001) (granting an extension to Solutia until December 13, 2001). The three other parties were granted a similar extension under cover of a letter dated November 19, 2001. Both letters are attached as Exhibit 1.

Sauget Area 2 sites is the proposal to list the Sauget Area 1 sites, another collection of sites in the same immediate area.[4]

In support of these comments, commenters enclose and incorporate by reference the Technical Report by Menzie-Cura & Associates, Inc., *Comments on Sauget Area 2 – HRS Scoring* ("M-C Report"), attached as Exhibit 5.

I. INTRODUCTION

EPA erroneously calculated the Sauget Area 2 score at 50 under the Hazard Ranking System ("HRS").[5] This score is premised on at least six fundamental errors by the Agency. When these errors are corrected, neither the combined Area 2 sites, nor any individual source scored separately, will exceed the HRS 28.5 listing threshold.

These errors include:

- Finding observed releases when no such releases have been properly documented;
- Improperly aggregating separate source areas into a single site, and failing to score sites separately;

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[4] More importantly, the Area 2 Administrative record includes a plethora of other nearby industrial disposal sites, waste generating entities, and contaminated soils that the agencies have identified as likely to have contributed to whatever contamination exists in the area. *See, e.g.*, Ref. 7 at O-8; Ref. 6 at 2-1 to 2-10; Historical Assessment of Hazardous Waste Management in Madison and St. Clair Counties, Illinois, 1890-1980 (Oct. 1988), attached as Exhibit 2; and the Executive Summary, Chapter 7, and Appendix of the 1988 E&E Expanded Site Investigation ("ESI") Dead Creek Project Sites at Cahokia/Sauget, Illinois, vol. 1 of 2, included as Ref. 3a in the Sauget Area 1 HRSDR, but not included in the Area 2 record. Maps showing the approximate location of the Areas 2 sites, nearby industrial sites, and other sites that U.S. EPA ("EPA") or Illinois EPA ("IEPA") have identified as likely to be contributing to contamination in the vicinity of Area 2, are attached, respectively, as Exhibits 3 and 4. Even IEPA acknowledges "the diversity and extent of contamination resulting from waste disposal activities in the Sauget Area," ESI, at 7-54, and specifically acknowledges that other sources of potential contamination exist, *id.* ("Additional potential (and in some cases, probable) sources of contamination exist in the immediate area of the [Area 2] sites. These sites may be contributing to some extent to the contamination detected at several of the . . . sites.").

[5] The HRS is set forth in Appendix A to the National Contingency Plan, 40 C.F.R. Part 300. In addition to the HRS, we also make substantial reference to EPA's Hazard Ranking System Guidance Manual ("HRSGM") [OSWER Directive 9345.1-07, EPA Office of Solid Waste and Emergency Response, Nov. 1992], a 500-page rulebook for HRS site scoring.

- Failing to take into account a removal action and other ameliorative steps which have had – and will have – the result of substantially diminishing site risks;

- Basing the scoring upon grossly inadequate evidence that a fishery and endangered species habitat are present;

- Exaggerating the waste quantities present in the Area 2 sites, and basing the scoring upon inappropriate waste constituents; and

- Using unreliable data and flawed sampling plans that fail to account for and distinguish discharges from other nearby industrial sources and activities.

Further, prior to final promulgation, because of the severe economic impact and novel legal and regulatory questions occasioned by the Sauget Area 2 listing, the package must be reviewed by the Office of Management and Budget ("OMB") under Executive Order 12866. EPA, however, impermissibly failed to obtain such a review, based on the erroneous assumptions that an NPL listing itself has no economic impact and that other issues, such as listing an area already in the process of remediation in the face of severe community impacts, were absent. Regarding impacts, the D.C. Circuit itself has repeatedly found to the contrary, exposing the fallacy of EPA's contentions that listing does not occasion serious adverse effects. Executive Order 12866 requires OMB review, and EPA erred in failing to obtain such review.

Lastly, listing the Sauget Area 2 sites is inappropriate as a matter of sound regulatory policy. Listing of Area 2 would serve no legitimate purpose and would violate Congress's intent, *inter alia*, to create the listing process principally as a preliminary screening tool. The Area 2 sites have already been extensively monitored and sampled, concluding evaluative studies are underway, contamination in the vicinity of the sites has already been addressed under CERCLA and other regulatory authorities,[6] the sites present low risk, and NPL listing will have the effect of complicating, delaying and greatly increasing the cost of remediation of an older industrial area struggling to revitalize itself and remain economically viable.

These errors and others fatally infect EPA's proposed listing of the Sauget Area 2 sites. The Agency's proposed action diverges from legally permissible action, ignores EPA's own regulations and policies, and constitutes an abuse of discretion, and arbitrary and capricious conduct. Similar conduct has required reversal of EPA listing

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[6] EPA has underway a complete array of remedial and immediately pre-remedial actions, described in subsequent sections of these comments, addressing the Area 2 sites. These actions do not require or depend upon NPL listing for their effectuation.

proposals in other cases. As in *Tex Tin Corporation v. EPA (Tex Tin II),* 992 F.2d 353, 354 (D.C. Cir. 1993), EPA's "imprecision [has risen] to such a level that agency action becomes arbitrary and capricious and not otherwise in accordance with law." *See also Anne Arundel County v. EPA,* 963 F.2d 412, 415 (D.C. Cir. 1992). Accordingly, the proposed listing of the Sauget Area 2 sites should be withdrawn.

These comments focus first on a summary of EPA's scoring and analysis errors in the HRS Documentation Record ("HRSDR," or "scoring package"), shift to a brief discussion of background information on Area 2 and the proposed sites, then discuss the reasons why listing of these sites would contravene CERCLA policy, disserving EPA's and the community's interests. Next, the comments return to a detailed discussion of the specific errors EPA made in the Scoring Package, followed by a discussion of the necessity for OMB review of this package under Executive Order # 12866.

II. SUMMARY OF EPA ERRORS

A. Evidence of an observed release is lacking

EPA's first fundamental error is in finding that there were observed releases from the Sauget Area 2 sites. EPA bases its findings on both a purported direct observation during and following a flooding event in 1993 and by chemical analysis. The conclusions reached by the agency are flawed, and are based upon invalid, inadequate and erroneous evidence.

EPA asserts that an observed release by direct observation exists. It does not. The assertion is based on photographs of debris and drums present on the surface of two of the site areas (Q and R) at some indefinite time following the 1993 flooding of the Mississippi River, unusable soil sampling data of the same general area more than a year after the flood, [7] and much later (1999) sampling of the contents of drums in the area, conducted in the context of a removal action. As discussed in detail below in section V.A., these disconnected, discrete events, relying on invalid or unusable sampling analyses, separated by years and lacking in integrity, simply do not establish a release by direct observation.

EPA also attempts to establish two observed releases by chemical analysis. These findings are based upon sediment sampling conducted in the Mississippi River adjacent to Site R and upstream of Site Q for other purposes and upon limited groundwater sampling in the vicinity of the sites, the data from which is unusable. These findings similarly lack the required linkage to Area 2 sites, and rely vitally on unusable

[7] None of the 1994 soil sampling results are valid and thus cannot be used to support an observed release. *See* Exhibit 5 at 12, 16.

sampling data.[8] The findings also do not discuss or eliminate other probable sources of the sediment contamination, and violate the HRS policy requiring attribution of some portion of the contamination to proposed listed sites.

Even if EPA somehow were able to justify allegations of an observed release, the release finding would be limited to either Site R or to Site Q, and could not be extrapolated to the other sites the agency has attempted to aggregate together in the proposed listing. Attribution and aggregation issues are discussed in detail below.

B. Area 2 sites are improperly aggregated

In the listing package, EPA has improperly combined non-contiguous and unrelated sites,[9] extending over several square miles, unaccountably selected from a legion of historically contaminated properties in a heavily industrialized district. The Area 2 sites vary greatly, in the identity of operations, potentially responsible parties and ownership, types of wastes, means of disposal, and likely remedies[10].

Moreover, EPA's justification for Area 2 aggregation appears to rest principally on vague and unsubstantiated allegations of regional groundwater contamination and on assertions that since wastes from Monsanto's Krummrich plant operations may have been sent to several, but not all, of the included sites, their combination is warranted. But the Area 2 sites in fact may involve over one hundred potentially responsible parties ("PRP's"),[11] and a broad menu of wastes received over many decades. Moreover, widespread regional groundwater contamination, by EPA's own description, cannot be traced to specific sources.[12] Scored separately or

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[8] None of the groundwater sampling data collected by EPA in 1999 and advanced in support of this contention of an observed release were validated and thus cannot be used. *Id.* at 14, 17.

[9] EPA preferentially uses the term "source" to describe each Area 2 entity it proposes to include in the listing, apparently in order to more easily justify aggregation. The HRSGM (at 9) defines "site" and "source" similarly, but the definition permits one site to include several sources. These comments use "site" preferentially, since, as outlined below, aggregation of these separate areas is inappropriate. EPA, of course, must meet the substantive aggregation requirements irrespective of nomenclature.

[10] For a detailed factual discussion of the aggregation issue, *see* Menzie-Cura Report on aggregation, Exhibit 5 at 2-11, and the later discussion on aggregation in these comments at Section VI.

[11] This fact was made clear by EPA itself when the Agency sent special notice letters in the year 2000 to almost 100 property owner, waste generator or transporter PRP's, over 50 of which it believed contributed or transported waste to Site Q, requesting that they conduct an RI/FS of Area 2 sites. Many other PRP's contributed to sites other than Q—especially Site O.

[12] *See* HRSDR at 13.

individually, no listing of Area 2 source(s) is warranted; and the effect of EPA's attempted aggregation is simply to confuse and complicate further the already complex scoring exercise in an unsuccessful attempt to circumvent the listing threshold.

The D.C. Circuit, restricting the use of EPA's Aggregation Policy, has forbidden such unrelated source or site combinations for HRS scoring purposes, requiring instead that individual sites or sources be separately scored. *See Mead Corp. v. EPA*, 100 F.3d 152 (D.C. Cir. 1996). Adjacent sites, after scoring and listing, may be combined if appropriate for remedial purposes, but each site must first be separately scored. Having failed to score the individual Area 2 sites, there is no basis for listing any Area 2 sites, individually or collectively.

C. Prior and current risk reduction steps must be included

In calculating the scores for the Area 2 sites, EPA violated its own rules and policies by failing to account for substantial reductions in risk caused by removals of wastes from Site Q. EPA also failed to acknowledge other pending voluntary and agency-mandated actions which are directed at detecting, managing, removing and remediating wastes in Area 2 and across the larger Sauget-Cahokia region — actions that negate the justification for listing. EPA's most recent CERCLA policy statements foster such risk reduction activities, and encourage the agency to include the effects of such actions in site scoring. *See, e.g.*, OSWER Directive # 9345.1-25, April 4, 1997, revising a 1991 policy entitled "The Revised Hazard Ranking System: Evaluating Sites After Waste Removals."

For example, when the scoring exercise is amended to include only the 1999-2000 removal activities at Site Q, the allegations of observed releases would, on that basis alone, be nullified, since each contention of an observed release rests entirely or in significant part upon results from samples collected prior to or during the removal action.

Of equivalent importance are the multiple agency actions and PRP activities completed or pending within Area 2. Like the Area 1 sites, Area 2 sites have been under almost constant agency scrutiny for over 30 years,[13] and effective action to address contamination in the region is underway. During the summer of 2000 EPA issued special notice letters to almost 100 PRP's, requesting that an RI/FS be undertaken for Area 2 sites. A group of 16 companies responded (the Sauget Area 2 Sites Group, or SA2SG). The companies entered into an Administrative Order on Consent (AOC) with EPA to perform the RI/FS work, which will include extensive sampling, already begun, and human health and ecological risk assessments. Most recently (November 14, 2001),

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[13] See the discussion of regulatory history below in Section III.A.

EPA made a subsequent demand for a focused feasibility study ("FFS") in the vicinity of Site R, designed to lead to an expedited remedy for that site.[14]

In addition, extensive sampling and analysis of area groundwater contamination is being conducted by Solutia under agreement with EPA in accordance with a Resource Conservation and Recovery Act ("RCRA") Corrective Action program applicable to Solutia's adjacent Krummrich facility.[15]

The effect of all of these actions has been, and will be, a substantial reduction in potential risk from contamination in Area 2, and elimination of the need for and justification of a listing for Area 2 sites.

D. The target (fisheries and sensitive areas) findings are unsupported

EPA based its Area 2 scoring on findings that fisheries and sensitive area targets were present. These findings are not correct, violate EPA's HRS policy, and are based upon unsupported allegations. Further, depending upon the validity of other scoring findings, these findings can be critical to EPA's attempt to score the Area 2 sites above the listing threshold.[16]

EPA found that a fishery existed in the Mississippi River adjacent to Sites R and Q, based upon an unverified report from a state official that "the entire Mississippi River is fished, and the area (adjacent to the Q and R sites) is bank fished." In fact, the record does not support people actually fishing at this location, nor contain any evidence that remnant hooks or other fishing gear were detected, nor anything else required by the HRSGM to verify EPA's contentions. The glaring lack of evidence is not surprising in light of the overwhelmingly industrial character of the area and the inaccessible nature of the bank adjacent to Area 2. *See* Exhibit 5 at 30-31.

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[14] EPA's letter required evaluation of a limited number of remedial alternatives for alleged groundwater contamination in the vicinity of Site R, followed by EPA's choice of remedial action and development of a ROD meeting CERCLA Section 121 cleanup standards.

[15] EPA included land and river areas in the Krummrich plant Corrective Action proceedings immediately adjacent to and downgradient of Source R, but refused to include R itself, despite the fact that Source R allegedly received only Monsanto plant wastes and despite Solutia's request that Source R be included. The HRSGM states "In general, it is agency policy to use RCRA Subtitle C authority to respond to sites that can be addressed under RCRA subtitle C corrective action authority, and not to place such sites on the NPL. (see generally 54 Federal Register 41000, October 4, 1989)". HRSGM at 20. While there are limited exceptions to this policy, none appear to be applicable in the case of Site R, and in any case, EPA did not even address this issue, apparently to avoid scoring problems with the Area 2 listing package.

[16] Even if any of the target findings could be validated, it would apply only to site Q or R, and could not be used to justify the aggregation--or to increase the scores--of other sites.

Further, a recent ecological risk assessment conducted based on the sampling results, including those of the flesh of fish caught in the Mississippi River concluded that bioaccumulative substances, upon which EPA bases its claims of threats posed by Area 2 sites, did not pose a risk to ecological health in the area.[17]

EPA also based its scoring of the site upon findings that the Area 2 sites affected sensitive areas — wetlands and endangered and threatened species habitat. These findings, too, were based upon factually inadequate and inaccurate data. There is no evidence in the record that any of the area allegedly affected by Area 2 sites has in fact been used as endangered or threatened species habitat, which is required by EPA's HRSGM, nor is there any acceptable current evidence that wetlands are threatened.

EPA's habitat "evidence" is principally a statement from a state official to the effect that, while no threatened or endangered species has been seen in the affected area, several of these birds have been seen at some time in the past at some distance from the Area 2 site, and, since birds range rather widely, such birds *might* use the affected area for foraging. EPA's wetlands documentation is also lacking in factual support and credibility. The listing document recites a study done many years prior to the listing proposal (in 1992) that does not satisfy the need for a current determination nor meet minimal standards for HRS documentation of wetlands.

E. EPA erred in grossly inflating source waste quantities and in making waste characterizations that falsely describe the toxicity, persistence and hazard of Area 2 sites.

EPA erred in calculating the Waste Characteristics Factor Value for Area 2 sites by both unjustifiably inflating the waste quantities present in Area 2 sites and by choosing an improper array of hazardous substances to determine the toxicity, persistence and bioaccumulative quality of Area 2 source waste components. The net effect of these choices by the Agency, in combination with other inappropriate decisions, was to boost the HRS score of the Area and individual sites artificially over the listing threshold.

EPA improperly inflated waste quantities in two respects. First, the Agency apparently used only a single old aerial photograph to derive waste quantities for each source area when other methods, preferred by the HRSGM, were available to

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[17] Baseline Ecological Risk Assessment for the aquatic habitat of the Mississippi River (Draft), submitted by Solutia in compliance with the RCRA Corrective Action program requirements applicable to the W.G. Krummrich plant. 2000, USEPA Docket No. R8H-5-00-003. Although EPA attempts to use sediment sampling data from that same program to support the Area 2 proposed listing, it did not mention or discuss the fish flesh data or the ecological risk assessment—apparently because the results did not support the contention that bioaccumulative substances pose a threat to human food or wildlife. *See* discussion of the risk assessment by Menzie-Cura in Exhibit 5 at 30 - 35.

supplant, qualify or correct this calculation. As one example, information collected during the 1999-2000 waste removal action at source Q should have been used by EPA to both reduce waste quantities at the site as well as to delimit the area of that source actually used for waste disposal.[18]

The use of a planimeter and aerial photos to define a waste disposal area is at best an uncertain, ambiguous method, even when multiple photographs of activities defining the life span of the site are available. Here, there is no evidence that EPA fairly selected a representative photograph for each site, that it had any evidence that the perimeter it did select defined a disposal area for hazardous substances, that EPA consulted other representative photographs, or that EPA made any other inquiries about the boundaries of the sites or wastes disposed there. It also avoided using other waste quantity data. In short, the record is devoid of any information justifying, corroborating or lending accuracy to EPA's arbitrary waste quantity figures.

Second, by impermissibly aggregating the Area 2 sites, and especially by including Source O in the aggregation, designating that Source as an impoundment, and using the impoundment waste quantity factor, the overall quantity factor was greatly inflated.[19]

In addition, EPA's choice of hazardous substances used to calculate the Waste Characteristics Factor Category Value is also incorrect, which further inflated the scoring of the Area 2 sites. EPA in each case chose unrepresentative substances, often based on sampling results which should have been eliminated from consideration based on EPA's own rules, or based on the fact that concentrations detected were below those presenting any significant risk. This selection by EPA had the effect of arbitrarily and

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[18] EPA represented samples taken from the south end of the Source Q area to be "background," indicating that the agency knew or believed that at least some significant portion of that purported Source area was not contaminated or used for waste disposal. Yet, completely inconsistent with this important fact, EPA calculated the waste quantity by reference to the entire area, without reducing the quantity by the amount of any uncontaminated "background" portion of this area. EPA cannot both claim that part of the source is uncontaminated background and simultaneously claim that this uncontaminated area should be included in hazardous waste quantity for Source Q.

[19] The evidence purporting to demonstrate that Site O should be designated an impoundment was in fact contradictory. The sampling data EPA used to include Site O revealed only slightly elevated concentrations of manganese, and concentrations of vanadium which were exceeded in other samples characterized in other sections of the record as background. In any event, neither manganese nor vanadium were substances upon which EPA based its target findings. Moreover, there was evidence in the record of actual waste quantity for Site O. In any event, the inclusion of Site O in Area 2 is clearly inappropriate. *See* Exhibit 5 at 4-5, 9-11.

erroneously maximizing the score of the Factor Category Value for each pathway.[20] This issue is more fully described in Section IX, B below and in Exhibit 5.

F. EPA erred in using unreliable data and in failing to collect information which was required to attribute contamination to Area 2 sites.

EPA used improper and invalid data to support critical findings in its scoring package. For example, all three observed release findings are void because, apart from other defects, each relies upon data that cannot be used under the HRS rules. Contrary to EPA's own rules, EPA used non-validated data and sampling results below CRQL levels to support findings. These issues are more fully described in Exhibit 5, and below in Section V, which describes the faulty observed release findings.

III. BACKGROUND

The Sauget Area 2 sites comprise five separate sites in the towns of Cahokia, Sauget, and East St. Louis, Illinois, roughly adjacent to the eastern side of the Mississippi River, directly across the river from St. Louis, Missouri. *See* HRSDR, site maps, at 9, 10.

Because of its favorable location, the Sauget-Cahokia area, and especially the area adjacent to the river, was one of the first locations settled in Illinois,[21] and has been heavily industrialized since well before the turn of the century. The Cahokia-Sauget area has been the home of literally hundreds of chemicals, oil refining and transportation, steel, rubber, metal smelting, refining, finishing and fabricating, electrical generation, barge and railroad transportation, food and beverage production, and other facilities, along with accompanying waste disposal areas. *See* Exhibit 2, Historical Assessment of Hazardous Waste Management in Madison and St. Clair Counties, Illinois, 1890-1980.

With the loss of much of its industrial strength, the Sauget-Cahokia area has been in serious economic decline since the 1960's. Ongoing attempts to revitalize the area are at considerable risk if the area becomes saddled with NPL-listed CERCLA sites.

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[20] As noted above, fish flesh sampling from fish caught in the river adjacent to the Area 2 sites contradicts the presence of the highly persistent, bioaccumulative substances (e.g., pesticides, PCBs) that EPA used to inflate Area 2 HRS scores. These substances were either not detected or detected at levels below those presenting any significant ecological risk.

[21] Cahokia, settled in 1699, was the first permanent pioneer settlement in what is now the State of Illinois. In addition to its industrial heritage, Cahokia has long been associated with aviation and pioneers of flight such as Charles Lindbergh and Amelia Earhart. Attempts to strengthen the economic fabric of the community building on that tradition with planned new aviation-related development may well fail if EPA's listing succeeds. *See* Exhibit 6, Letters from the Mayor of Cahokia to EPA Administrator Christy Todd Whitman opposing the listing of Areas 1 and 2.

EPA's view that the listing of a site on the NPL causes no adverse economic impacts is patently wrong, a fact which numerous courts, economists, and political writers have confirmed.[22]

The regulatory history of the area is also complex and richly detailed. EPA and the State of Illinois have regulated industrial waste sources and disposal facilities in the Sauget-Cahokia area, including the Sauget Area 2 sites, for most of the past thirty years. During this interval, the agencies, in collaboration with site owners, operators, and waste generators, have made considerable progress in identifying and cleaning up contamination in this century-old heavy industrial region. Recent progress, detailed below, has been especially rapid and fruitful.

One aspect of the regulatory effort in this area, however, has been notably unsuccessful. Despite several attempts to list Sauget Area 2 sites individually or in various combinations on the CERCLA National Priorities List, the agencies have failed to develop and present information that would justify such an action. However, having already achieved at the Sauget Area 2 sites the great bulk of what an NPL listing would secure, EPA unaccountably persists in the pursuit of an objective that will yield the Agency little, but will heavily punish the local economy.

A. Regulatory History

Some details of the regulatory history of the Sauget Area 2 sites will aid in understanding the perspective of the Sauget-Cahokia industrial and residential community and may help place EPA's actions in a clearer light.

Several Area 2 sites were permitted or otherwise regulated by State of Illinois public health authorities prior to the 1950s. The Illinois EPA began making routine inspections of **Sites R and Q** as early as 1971, and began sampling monitoring wells at **Site R** in 1972.[23]

Disposal activities ceased and closure action began at **Site R** in 1977.[24] IEPA also began investigating conditions at **Site P** that same year.[25]

EPA began investigations at **Site Q** in March 1980, issuing a Preliminary Assessment Report and Potential Hazardous Waste Site Identification.[26] **Site Q** was then

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[22] As one particularly pertinent example, the Mayor of Cahokia has written a letter to the agencies opposing listing because of its effect on her community. Exhibit 6.

[23] Ref. 7, at R-3; *see also* 1988 Expanded Site Investigation ("ESI"), E&E, Vol. I, p. 2-54

[24] Ref. 7, at R-8

[25] Ref. 7 at P-3.

the subject of an on-site inspection in 1983 to underpin the Hazardous Waste Site Preliminary Assessment.[27]

EPA contracted for an HRS scoring of **Site R** in July 1982; but the site scored only 7.23, and could not be listed on the NPL.[28]

In 1985, EPA broadened the targets to include a group of sites, arbitrarily designating them as **Area 2**, and hired a contractor to begin an expanded site investigation ("ESI").[29] The ESI report took almost three years to complete and was issued in May 1988. Site S was not included and other Area 2 sites were described differently.

In 1991, IEPA issued a CERCLA screening report (intended to lead to an NPL listing) for the **Area 2 sites.**[30] Not until four years later, in 1995, was an expanded site inspection report issued for the **Area 2 sites.**[31] And not until four years after that, in 1999, did IEPA again visit the **Area 2 sites** to conduct yet another site inspection to support the current listing effort.[32]

During this long interval of regulatory investigation and preparation, Solutia, Monsanto, Cyprus AMAX, Chemical Waste Management, Ethyl, and other potentially responsible parties for Area 2 sites have acted both independently and in collaboration with the regulatory agencies and each other to sample, collect and analyze information, and proceed with remedial planning and action at Area 2 sites.

For example, since 1990 Monsanto spent in excess of $5 million on sampling, studies and monitoring of **Site R**, which accepted Monsanto wastes. In 1991, Monsanto signed a consent order with IEPA requiring the company to conduct an RI/FS, a preliminary step under CERCLA to deciding how **Site R** would be remediated. Monsanto submitted a report to IEPA in 1993, revised it in 1994 to take into account IEPA comments, but, despite transmitting periodic monitoring reports and paying state

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[26] Ref. 7.

[27] *Id.*

[28] Ref. 7 at 2-61, R-19, and R-24.

[29] Ref. 7 at 2 and 2-64. This Report covered a much larger area at Site O, Site P, a much smaller (90 acre) Site Q and Site R.

[30] Ref. 6.

[31] Ref. 7.

[32] Ref. 9.

costs, has never received written comments or approval of the RI from the agency. Very recently, however, EPA has demanded an expedited FS of Site R.

In June 2000, EPA sent out Special Notice of Liability Letters to almost 100 PRP's (in large part culled from Site Q records) for all of the Sauget Area 2 sites included in the proposed listing, requesting that an RI/FS for the Area 2 sites be conducted. In November 2000 a consent order (Administrative Order on Consent, or AOC) was signed by 16 of the companies that had received the EPA letter, committing to perform the RI/FS. The agreed RI/FS plan of action will require sampling of all Area 2 sites, regional groundwater, and the Mississippi River. Sampling under that plan has now begun, and the total cost of work under the plan will be millions of dollars.

As a third example, Solutia signed another consent order ("AOC") with EPA to undertake Corrective Action under RCRA at the company's Krummrich plant, a large facility located near several Area 2 sites. *See* Exhibit 4, Map of industrial facilities in the vicinity of Area 2. The AOC also required Solutia to include an area adjacent to Site R, between Site R and the Mississippi River, previously housing terminal and other facilities (but, as noted previously, omitted Site R itself). The RCRA AOC requires extensive ongoing groundwater sampling in the Site 2 area and sampling and preparation of an ecological risk assessment of the Mississippi River. The goal is to determine the extent to which area groundwater is contaminated, and whether the Krummrich activities may be contributing to that contamination. While EPA has attempted to use certain results of the RCRA AOC work — sampling conducted by Solutia and EPA in the Mississippi River — where that work supports EPA's proposed listing, the Agency has inexplicably failed to credit other findings of the report which clearly show that the ecological risks to the river are minimal.[33]

Collectively, these PRP activities demonstrate a firm commitment, after years of agency study and apparently wasted effort, to proceed on an orderly and effective path to remediate contamination in the Sauget Area 2 sites. Indeed, coupled with the even greater progress in the remediation of the Sauget Area 1 sites, and the Corrective Action work undertaken by Solutia, the clean-up of the entire Sauget-Cahokia region is advancing rapidly. These efforts also evidence the quite adequate authority which the agencies can and do wield under CERCLA and other statutes absent NPL listing to gain the cooperation of PRP's in remediating contamination, obviating the need for employing the destructive force of an NPL listing, even were it available.

B. <u>The groundwater contamination attribution problem</u>

EPA contends that groundwater beneath the Area 2 sites has been contaminated by those sites, asserting that the contamination is in the form of a plume

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[33] *See* Page 7 and Footnote 15.

that cannot be identified with a single source. EPA states, "[t]he ground water plume contains a mixture of the hazardous substances found at the [Area 2] sites. Due to limited sampling and the nature of the groundwater flow beneath the site, the exact extent of the plume is unknown."[34] EPA nowhere defines the size, extent, depth, movement, or water quality of this alleged plume. More importantly, EPA has failed to delineate, through sampling or otherwise, the sites that have contributed to the groundwater contamination.

A critical fact EPA has not acknowledged in the listing package is that there are many facilities located upgradient of, or in close proximity to, the Area 2 sites that EPA has elsewhere claimed to be sources of groundwater contamination. These sites may well have contributed significantly to any contaminated groundwater plume. These include[35] two sources located immediately proximate to Area 2 sites: the Clayton Chemical Company and the Bliss Waste Oil Company sites, both defunct recyclers. Both of these sources were discussed in earlier agency reports on Area 2 sites,[36] both were documented as having released wastes identified as contaminants in the Area 2 groundwater plume, and both were completely ignored by EPA in the listing package, without explanation.

In addition to these sites, the Krummrich facility,[37] and at least six other facilities operated in the immediate vicinity of the Area 2 sites, handled and/or have been identified in agency reports as having released similar wastes. These facilities include a Mobil Refinery, the T.J. Moss wood treating plant, the Phillips Petroleum terminal and bulk storage plant, the Sterling Steel foundry, Cerro Copper, and the Midwest Rubber Reclaiming Company.[38] Agency reports have claimed that these sites have been responsible for documented releases of contaminants. Many of these released

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[34] HRSDR at 13, 54.

[35] EPA asserts in the Area 1 listing package that the Area 1 sites contributed to groundwater contamination. Some of these sites are upgradient of Area 2 sites. *See* Area 1 HRS Documentation Record at 1 ("Groundwater data indicates that groundwater contamination attributable to the Sauget Area 1 site is present.") While comments filed today contesting the Area 1 listing demonstrate that Area 1 sites are not responsible for significant contamination, it is notable that EPA failed entirely to discuss in the Area 2 listing package its assertion that these sites contaminated area groundwater.

[36] ESI report at 2-8 and 2-26; Ref. 6 at 2-6; Ref. 7 at O-8.

[37] The Krummrich RCRA ecological risk assessment (see footnote 39) clearly presents the difficulty in attributing the groundwater contamination in this area to any single or group of sources.

[38] Several other area sites have engaged in remediation activities, but the nature and effectiveness of those efforts is not mentioned or discussed by EPA, nor have samples been taken and evaluated to determine the contribution of any of the area sites not included in the listing package.

compounds were included in the list of those detected in the Area 2 groundwater plume or soils, and all were ignored by EPA in the Area 2 listing package.[39]

Apart from the obvious inconsistency in EPA's selection of sites to aggregate in the Area 2 listing package, the existence of proven, similar contaminant releases from other facilities disproves EPA's contention that it can attribute groundwater contamination to specific Area 2 sites in compliance with the HRSGM. It graphically points out the vital need to collect and analyze additional groundwater sampling data to tie contamination to Area 2 sites before any HRS scoring for Area 2 can rationally proceed. Notably, a large body of additional targeted groundwater sampling and analysis will be obtained by the Agencies through efforts already underway under AOCs for the Area 2 RI/FS, the accelerated FS for Site R, and the Krummrich RCRA Corrective Action program.

The arbitrary nature of EPA's selection of sites for inclusion in EPA's hypothesized "Sauget Area 2" also highlights that EPA elected to include "sources" consistent with EPA's improper aggregation of sites and excluded sources inconsistent with such an aggregation attempt. That EPA had to pick and choose from areas and sites all likely contributors to the same groundwater to boost its scoring effort highlights the improper nature of EPA's aggregation attempt.

IV. LISTING SAUGET AREA 2 WOULD NOT SERVE THE PURPOSES OF THE NPL

As an initial threshold question, an NPL listing should serve legitimate and needed public health and welfare purposes if it is to proceed. The D.C. Circuit has recognized that listing on the NPL often has significant, real adverse consequences for a site, those allegedly liable for it, and the surrounding communities. Here, the listing of the Sauget Area 2 sites on the NPL would neither serve the purposes that Congress and EPA intend for NPL listing, nor achieve any other legitimate goal, and would materially harm the Cahokia community and threaten its economic life

EPA claims that the NPL is "primarily to serve as an informational tool for use by EPA in identifying sites that appear to present a significant risk to public health or the environment." 49 Fed. Reg. 37,070, (Sept. 1984). The initial identification of a site for the NPL will help determine which sites require further investigation, and to determine what response action, if any, will be appropriate." *Id.* According to the United States Court of Appeals for the D.C. Circuit, the NPL is "intended to be a 'rough list' of prioritized hazardous waste sites; a 'first step in a process.'" *Kent County v. EPA*, 963 F.2d 391, 394 (D.C. Cir. 1992). It is to be an "initial determination of which sites may

[39] All of these agency-identified potential sites of contamination are located on the map included as Exhibit 4.

warrant further action under CERCLA." *RSR Corp. v. EPA*, 102 F.3d 1266, 1270 (D.C. Cir. 1997); *see also Eagle-Picher Ind., Inc. v. EPA*, 759 F.2d 905, 911 (D.C. Cir. 1985). After NPL listing, the site may undergo a more extensive investigation, such as an RI/FS. *See* HRS Guidance Manual, at 3 (demonstrating that NPL listing is to occur during the "Site Assessment Phase," while the RI/FS is to occur after NPL listing, during the "Remedial Phase").

EPA sets forth the following purposes of the NPL: (1) determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with a site; (2) identifying when CERCLA-financed remedial actions may be appropriate; (3) notifying the public of sites EPA believes warrant further investigation; and (4) serving notice to PRP's that EPA may initiate CERCLA-financed remedial action. *See* http://www.epa.gov/superfund/action/law/-npl_hrs.htm.

In the case of the Sauget Area 2 sites, the proposed NPL listing is not a "first step" in the process, nor is it an "initial determination" of whether the sites warrant further investigation. Rather, the proposed listing is occurring after EPA and IEPA have spent millions and over twenty years investigating the sites, after the RI/FS is in progress, and after the PRP's and the public are well aware of the existence of the sites and the need for additional investigation and action — action which is already being undertaken, and, indeed, after the PRP's have already committed to spend millions of dollars on the sites.

A. Listing Sauget Area 2 is not justified because EPA and IEPA have already decided which sites warrant further remedial investigation or completion and have already obtained legally binding commitments from PRP's to assess the nature and extent of the human health and environmental risks associated with these sites.

A principal purpose of NPL listing does not exist in this case, because EPA and IEPA have already extensively investigated Sauget Area 2 sites and risk studies are in the process of completion. The IEPA has been investigating Sauget Area 2 sites since at least 1971. *See* Refs. 6 and 7. Formal reports were prepared in 1988, 1991, and 1999. In 1985, IEPA began a full scale RI/FS of the entire Sauget Area, including Area 2 sites O, Q and R (P was eliminated as not suitable for aggregation, and S was not identified or included).[40] IEPA later changed the scope of the project into an Expanded Site Investigation ("ESI"). *See* Sauget Area 1 Ref. No. 3a, at 2-1, and 2-8 to 2-17. The E&E Expanded Site Investigation studied 18 areas from the Mississippi River eastward past Dead Creek, including Area 2 sites, and was completed in May of 1988. *See* Ref. No. 7.

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[40] Ref. 7.

Beginning in 1991, at EPA's request, the IEPA conducted a Screening Site Inspection of Sauget Areas 1 and 2, which included sites O, Q and R and two other sites not included in the current Area 2 listing proposal *See* Ref. No. 6, at 1-1, 1-2, and 2-1. In 1991, Monsanto agreed to perform an RI/FS for site R and completed the RI in 1993 with subsequent amendments after IEPA comments. *See* Ref. No.17 and 24 (which include partial sections of the RI report.)

In May 1999, IEPA conducted yet another Expanded Site Inspection of the Area 2 sites, and conducted extensive sampling.

Despite its pursuit of an NPL listing, EPA has quite clearly already determined how the Agency should address Sauget Area 2. As noted above, in June 2000, EPA issued Special Notice of Liability letters to almost 100 PRP's to implement a RI/FS for the Area 2 sites, to which a group of 16 companies affirmatively replied.[41] This Area 2 site group signed an administrative order on consent to perform the RI/FIS work, and to prepare an human health and ecological risk assessment. Recently, the vicinity of Site R has been singled out for an expedited FSS potentially resulting in remedial action.

In addition to these steps, Solutia has also performed, and will continue performing, sampling and analysis work on the groundwater in the area under a May, 2000 RCRA corrective action consent order applicable to the Krummrich plant, which includes the evaluation of effects on the Mississippi River adjacent to Area 2.

Solutia has already spent approximately $5 million in completing the RI for Site R, millions more on the Krummrich corrective action work, and has committed to pay its share of the millions in costs for the RI/FS for the Area 2 sites. Sampling for the RI/FS has already begun. Completion of the RI/FS is scheduled for 2003.

Thus, it is apparent that EPA had already concluded that it would not wait for NPL listing to get an in-depth, complete investigation underway in Area 2, which would incorporate full risk assessments and an evaluation of remedies, and that it would itself split the sites apart and differentiate them for remedial purposes.

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[41] "Special Notice of Liability" letters re Sauget Area 2 sites, dated June 23, 2000 from Wendy Carney, USEPA Region V. Also, as noted previously, EPA recently demanded a supplementary targeted FS for Site R, which is designed to speedily evaluate and implement a remedy to alleged groundwater contamination at Site R. EPA letter dated Nov 14, 2001 from Mike Ribordy, USEPA Region V.

B. Listing Sauget Area 2 is not justified because removal actions and other remedial commitments greatly reduce site risks

Another principal purpose of NPL listing — to address sites posing the greatest risk to human health and the environment — is absent. All the Area 2 sites are now subject to a consent decree which has initiated the remedial process. More importantly, Sites R[42] and Q, the only Area 2 sites located on the river side of the Mississippi River levee and thus potentially subject to flooding risks, have been subject to studies and removal and remedial actions that demonstrate any potential risks are low. Two separate removal actions have been conducted at Site Q — in 1995 and in 1999-2000 — which eliminated thousands of tons of soil and hundreds of drums. *See* Ref. 18. The proposed listing has not taken into account any of the risk reduction activities and commitments which EPA's CERCLA program deems an important component of determining which sites should receive scarce federal clean up monies as NPL listed entities.

C. Listing Sauget Area 2 is not justified because PRP's and the public have already been notified of the existence of the sites and the need for additional investigation.

PRP and public notification and participation objectives underlying NPL listing are not served in this case, since EPA has already notified PRP's and the public of the existence of the Sauget Area 2 sites and EPA's intentions regarding the sites. In particular, EPA issued to the PRP's a Special Notice Letter in 2000 for the RI/FS. Even before that, the public had been notified of investigations and cleanups.[43]

The public is already fully aware of the existence of the Sauget Area 2 sites, and has been kept informed of new developments over the years as Solutia has proceeded with work under the Site R RI/FS, the Krummrich corrective action work, as well as the agency-led cleanup work under the Site Q removal actions. Solutia has participated at every Cahokia town hall meeting in the last several years to address residents' questions regarding work at the sites. Solutia also operates a twenty-four-hour community hotline to address residents' concerns as they arise. Certainly, after twenty years of sampling and studies, and the expenditure of millions of dollars by IEPA, EPA, Solutia and other parties, the proposal for NPL listing has not proved expeditious or inexpensive. *See, e.g., RSR Corp. v. EPA*, 102 F.3d at 1270. Nor is it apparent what purpose NPL listing would serve. The time has long passed where listing of the sites would have any benefit. Today, a thorough investigation of the sites is in process, following years of agency and PRP investigations and analysis, removal of the greatest

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[42] As noted previously, since 1993 Site R has been subject to a separate RI/FS consent decree commitment.

[43] *See, e.g.*, Ref. 8 at 11 (Site Q removal public meetings).

and most immediate human or environmental threat is complete or underway, and final remedy determination is in the offing.

V. EPA FAILED TO ESTABLISH AN "OBSERVED RELEASE" TO SURFACE WATER OR GROUNDWATER

EPA incorrectly scored "observed releases" by direct observation and chemical analysis for the surface water overland flood migration component of the HRS scoresheet. *See* HRSDR at 34-41. EPA also incorrectly scored an observed release by chemical analysis for the groundwater to surface water migration component. *See* HRSDR at 54-55. As discussed below, there is no basis for scoring any observed release at the Area 2 sites. EPA's methodology is defective, relies upon invalid and unusable data, violates the Agency's own policies and guidelines for HRS scoring, and is logically inconsistent.

A. There can be no observed release by direct observation because essential information is absent or inadequate.

EPA has scored a release by direct observation for the overland flood migration component based upon three pieces of inconsistent data, widely separated in time, which individually and collectively fail to meet the minimal requirements of the HRS scoring system for establishing a release by direct observation. First, EPA relies upon aerial photos of a 1993 flood of the Mississippi River which inundated Sites R and Q, baldly asserting that the flood waters were in direct contact with hazardous substances. HRSDR at 34, Ref. 10 at 7-8. The photos, which are largely illegible in the copies available to commenters, apparently do show flooding of the general area, but show little else, since they were obviously taken from an altitude of several thousand feet. Nowhere in the record is there any evidence documenting that hazardous substances were present at the time of the flood or in contact with flood waters.

EPA next relies on photographs taken "after the flood" (again illegible), which purport to show "waste and debris" or "debris along Mississippi River bank & floodplain" at Site R (Ref. 13 at 1) and "drums exposed after 1993 flood" at Site Q. The photographs relied upon by EPA are undated, the photographer is identified only as "IEPA personnel," and there is no sampling or other information identifying or describing the waste or debris, or the contents of the drums. There is no information in the record from which EPA can deduce from these two initial references that a release of hazardous waste has occurred.[44]

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[44] Indeed, had the agencies been concerned about a purported release, it would have been relatively simple to provide necessary documentation by contemporaneous sampling or other activities at the site.

EPA's next citation in an effort to support a directly observed release is sampling data, apparently from Site Q conducted well over a year after the Summer 1993 flooding event (in November 1994 – although EPA asserts without support that the data "show hazardous substances present at the surface, *directly after the 1993 flood*" HRSDR at 34). **Most importantly, none of these data has been validated and thus cannot be used to support an observed release.**[45] Moreover, the locations of the samples are not marked; the sampling event is not described in the cited reference; it is not clear what media at what depth were sampled; nor where background samples, if any, were taken. It is also notable in this regard that the identification of the facility in the sampling report is "Sauget SA 1 and 2." Thus, the sampling report itself does not even attempt to distinguish the analysis applicable specifically to Sauget Area 2, if any, as opposed to Sauget Area 1.

The last piece of information on which EPA relies to support an observed release is sampling data from drums extracted during the removal action at Site Q in 1999-2000 — almost seven years after the flooding event upon which EPA is relying to establish an observed release. HRSDR at 34, Ref. 8 at B-12 to B-16. Important sampling results from this sampling have also not been validated and cannot be used under EPA's own protocols.[46] Moreover, there is no specification of sample locations, nothing tying these drums to the 1993 flood, and nothing suggesting that anything in these or other drums was actually released to the environment in 1999, let alone in 1993.

EPA's attempt to stitch together a story of an observed release thus falls well short of meeting the required elements for establishing this crucial finding. The minimum required is to adduce "...evidence that the hazardous substance was placed into or has been seen entering the medium (of concern)." HRSGM at 57. EPA has failed to produce or cite any reliable information that the flooded areas contained hazardous substances *prior to* the flooding event, or that hazardous substances were released into the Mississippi River from the site. Sampling—even were it valid, which this sampling is not — conducted over a year after the flooding event cannot possibly suffice to fulfill EPA's evidentiary burden. Nor, certainly, can drum sampling conducted more than six years later. While EPA apparently photographed debris on the surface after the flood, there is no evidence in the record that any of the debris constitutes a hazardous substance, or that it in fact originated at Sauget Area 2, or entered the Mississippi River. Moreover, authentication and identification of the photographs is missing — the photographs cited in the record are undated, the photographer is unknown, and the locations are only haphazardly described. Lastly, there is no contemporaneous or valid sampling information at or near the time of the flooding event — critical information that cannot be supplied by later sampling at Site Q, particularly given the fact that, as EPA states, access

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[45] Exhibit 5 at 12, 16.

[46] *Id* at 12-13, 16-17.

to the site was not restricted.[47] As the HRSGM cautions: "Adequate documentation of observed releases...is extremely important. Be certain that they are documented carefully and thoroughly." HRSGM at 28. EPA has failed to do this, and no observed release by direct observation has been established, and the finding must be stricken from the record.

B. There is no observed release by chemical analysis.

EPA next attempts to establish observed releases by chemical analysis, both for the surface water migration pathway (HRSDR at 39-41) and for the ground water to surface water migration pathway (HRSDR at 54-60). Neither attempt meets the minimum requirements for demonstrating an observed release by chemical analysis, and should accordingly be removed from the record.

1. EPA has failed to demonstrate an observed release by chemical analysis for the surface water migration pathway.

EPA bases a purported finding of an observed release by chemical analysis on Mississippi River sediment sampling results from a program, carried out by Solutia and an EPA contractor in late 2000 in the vicinity of Site R to satisfy RCRA corrective action program requirements for the Krummrich plant, followed by the attempt to attribute substances detected in the river sediment to Area 2 sites. There is no observed release. First, as in the case of data used to support other observed release findings the data used by EPA to support this finding (HRSDR at 39-41) are not usable.[48]

The second defect in the finding is that the sampling was done for a wholly different purpose than that for which EPA is attempting to use it. The river sediment sampling was done to assess conditions in the Mississippi River adjacent to Site R. The samples were not taken to assess, nor can they be used to document, surface runoff conditions at Site R or any other site.[49]

Third, EPA cannot attribute the sampling result(s) to any of the Area 2 sites east of the levee, since there is no demonstration anywhere in the record that

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[47] "Access to the Site (Q) is unrestricted..." Ref. 8 (OSC Report on the Site Q removal action in 2000), Executive Summary, at 1.

[48] *See* Exhibit 5 at 12-13, 16-17. EPA based its finding on 13 sample results compared to background. Those results are clearly unusable, because of lack of comparability to background, results less than the SQL, or lack of grainsize data to assess comparability. Even if grainsize information were available in the record, which it is not, only a single sample result--#SD-5-150, for a single substance—chlorobenzene—would be otherwise usable, and this result would not in any event be usable for Site O, Site P or Site S, where chlorobenzene was not located.

[49] Exhibit 5 at 13.

overland or flood flow from these sites could possibly reach the Mississippi River. Nor can these results be attributed to Site Q, which is downstream of the sediment sampling locations, which were adjacent to or upstream of Site R. *See* Exhibit 5 at 13. Moreover, (even were the sampling results usable, which they are not) the attribution of the sediment sample results to Site R is likewise improper because there are no surface soil samples taken at Site R that support the premise that the compounds found in the sediments (chlorobenzene, 4-chloroaniline, 1,4-dichlorobenzene, and 4,4'-DDD) are present in surface soils (or near-surface soils) at Site R. *Id.*

If EPA unaccountably persists in believing that all the Area 2 sites contribute to an overland/flood release, the agency would have to rule out the potential contribution of many other sources in the area. EPA and IEPA have claimed, in other documents and regulatory settings, the existence of many other sources of potential contamination of similar compounds in the immediate area which are upgradient of the river sampling location(s). These potential sources include: Bliss Waste Oil, Clayton Chemical Company, Mobil Oil Refinery, Phillips tank farm and terminal, Krummrich Plant, contaminated areas of the Sauget Wastewater Treatment Plant ("WWTP")(outside of Source O), CERRO Copper, Sterling Steel Foundry, Rogers Cartage, and the Midwest Rubber Recycling facility, among others. None of these facilities or even mentioned or discussed by EPA in the listing package as sources of the sampled contamination, let alone ruled out on the basis of sampling. In a note of irony, EPA did not even mention the fact that a land area was located between the northern portion of Site R and the Mississippi River (which apparently was made part of the Krummrich corrective action program and involved in the river sampling program).

Since none of these sources was discussed or even mentioned in the HRSDR, and their effects were not taken into account in the sampling program, the sample results on which EPA relies to establish an observed release by chemical analysis cannot possibly establish a release from Sites R and Q – or O, P or S. To establish an observed release based upon sediment samples, EPA would need to establish that "some portion of the significant increase [over background levels] is attributable to the site." HRS Section 4.1.2.1.1 (Ref. 1 at 51,609). When other, confounding sources are present, as here, the Hazard Ranking System imposes a special condition: "When other sources are present in the vicinity of the source being evaluated and may have contributed to the significant increase (e.g., in heavily industrialized areas) it generally is necessary to obtain sufficient samples between the site being evaluated and other known potential sources (or between the site and adjacent sites) in order to demonstrate an increase in concentration attributable to the site." HRSGM at 59. In violation of its own rules, EPA failed to do this. In relying solely on unusable sediment sampling conducted for purposes other than the proposed listing of Area 2 sites (Krummrich plant corrective action), the observed release finding is not documented. EPA obviously did not and could not tailor the sampling to fit the requirements of the HRS and HRSGM, that is, to demonstrate that any contamination disclosed by the sampling was attributable, in part or in whole, to the Area 2 sites.

EPA could have, and had the obligation to, validate use of the sediment data and conduct additional sampling to ascertain whether any Area 2 sites were contributing to an increase in the measured contaminants, and whether in fact other sites in the vicinity were instead responsible for the contamination. Having failed to do so, an observed release cannot be established—even if sampling data defects did not otherwise totally condemn the effort, which they do.

Lastly, the author and source of the interpretive summary of the river sampling results upon which EPA has critically relied are not identified. The document is undated, and, even more curiously, only pages 1 and 3 of the summary are included in the record. This elision is in direct violation of the HRSGM requirement that complete copies of key references be included in the record (*see* HRSGM at 27-28). This critical deletion alone voids the credibility of the conclusory information upon which EPA has relied and the resultant conclusion.

2. There is no observed release by chemical analysis for the ground water to surface water migration component.

EPA next contends that it has established a third observed release by chemical analysis based upon its contention that the ground water beneath the Area 2 sites is contaminated from those sites and reaches the Mississippi River. This assertion fails for several reasons.

In order to establish this category of observed release, EPA must show **both** an observed release of specific hazardous substance(s) to the ground water pathway attributed to Area 2 sites, and an observed release to the surface water of that hazardous substance(s). HRS 4.2.1.3. EPA has shown neither, and has avoided entirely dealing with the critical and difficult problems of attribution in a heavily industrialized region where other sources have clearly contributed substantially to the groundwater contamination.

a. An observed release to groundwater has not been established because EPA has not determined the effects of other sources.

EPA relies upon a series of widely scattered sampling results to attempt to establish a release to groundwater, apparently from each of the Area 2 sites. **None of these data is usable to establish an observed release because the results are not validated.** Exhibit 5 at 14. There are several additional defects in that data, even if they were validated. *Id.* For example, only three purported background samples were chosen, and, contrary to EPA's assertions, the locations are neither upgradient from the release samples or the Area 2 sites (one is within a site: #G108, and the other two are clearly downgradient from sites: #G109 [site P] and G101 [site R]). The data are clearly not adequate to support the agency's contentions that they prove that "hazardous substances

are not emanating from another source off-site or found naturally in the area." HRSDR at 55.

Rather, the supposed background sampling locations appear to have been chosen merely to *avoid* determining the contribution that other non-Area 2 sources might be making to regional groundwater contamination. For example, no samples were taken downgradient (*i.e.*, to the west) of the Krummrich plant, which is located to the east of the Area 2 sites, and which should have been ruled out as a source of contamination to groundwater. *See* Ref. 12 at 2-4.[50] Nor are there any samples taken between the Phillips Terminal and Site Q. Nor are any samples taken between a highly contaminated area west of the Sauget Sewage Treatment Plant and the north end of sites Q and R (*see* Ref. 7 at O-4). Nor are there any samples taken between the Sauget Area 1 sites and the Area 2 sites[51].

In short, EPA has not even minimally complied with its obligation to define the contribution of sources of contamination to the groundwater in Area 2. EPA seems to have taken the position that since its scattered sampling has detected groundwater contamination under parts of Area 2, it need not probe any further to define the extent, depth, or constituents of that contamination, or determine whether that contamination is in fact attributable to the sites proposed for listing, or to other, non-Area 2 sources. The absence of legitimate attribution documentation violates the clear requirements of the HRSGM, which requires that the agency, in industrial areas where other sources are present "to obtain sufficient samples between the site being evaluated and other known potential sources...in order to demonstrate an increase in concentration *attributable to the site*." HRSGM at 60-61 (emphasis added).

The Hazard Ranking Manual goes on to suggest methods to establish attribution — data on concentration gradients, based on samples from multiple wells or a

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[50] IEPA conducted an expanded site investigation of the area around the Krummrich facilities in May of 1999 which included sampling west (i.e., toward the nearby Area 2 sites) of the facilities. The sampling purported to show soil contamination and significant groundwater contamination west of the Krummrich site. However, none of those results — with the exception of the apparent use of one sample that EPA deemed to be background for the Area 2 investigation (and which could not be located since the site sampling location map was deleted from the scanned record document of the Krummrich report) — were used or discussed. If EPA were to supplement the record to include the missing documents, commenters hereby request and reserve the right to file comments on those missing documents. EPA's failure to consider the impact of off-site sites is just one example of EPA's circumvention of its responsibility to make meaningful attribution efforts.

[51] As noted previously, EPA contended in the Sauget Area 1 listing package that these sites contributed to groundwater contamination; although contested, EPA had the responsibility to rule out this putative source.

series of samples between the site and the alternative source; data on flow gradients or other information about the movement of hazardous substances in the environmental medium; or analytical "fingerprinting" data that establish an association between the site and a unique form of the substance or unique ratios of different substances. *Id.* EPA employed none of these devices, and its attempt to establish a release to groundwater therefore violates EPA's own regulations.

b. An observed release to surface water has not been established.

EPA has also failed to satisfy the second requirement for demonstrating an observed release in this pathway — it has not shown a release to surface water of contaminated groundwater attributable to Area 2 sites. Again, EPA's position seems to be that since contaminated groundwater exists under some portions of Area 2, and sediments underlying the area suggest communication between the Mississippi River and area groundwater, it is entitled to assume a release of hazardous substances from specific Area 2 sites to the surface water has occurred. The Hazard Ranking System does not allow such unsupported assumptions. The only evidence that the agency attempts to cite is a 20 year old report (not included in the record) speaking generically of "leachate seeps" from the bank near Site R to the river. *See* HRSDR at 54; Ref. 7 at R-15.[52]

EPA's own rules do not allow the Agency to assume an observed release by chemical analysis based merely upon assertions of hydraulic connectivity: the HRS requires that the requirements for an observed release to surface water by chemical analysis also be met. HRS at 4.2.1.3. This requirement also has not been satisfied. There are no chemical analysis data presented, and no data from which river contamination caused by ground water seepage or flow can be established. EPA baldly asserts that "[[i]t is *believed* that contamination from each of the sources has combined in the ground water to form a plume which can not be identified with a single source. Due to the link between the ground water in the area of the site and the surface water...it is also *believed* that the contamination in the Mississippi River sediments was deposited by migration of the ground water." HRSDR at 54 (emphasis added). By using the word "believed" twice, EPA highlights the gaping evidentiary hole in the record. Nothing in the HRS entitles EPA to found listing decisions on a mere "belief." EPA is required to

[52] Apart from the fact that EPA has made no effort to include and justify the use of the original data and so is precluded from relying upon it, the use of a 20 year old report of a release is surely too remote in time to support a current listing. In fact, at the time (1982) that these data were collected, EPA scored site R based upon the information; the site scored 7.23 — far below the 28.5 required for NPL listing. Ref. 7 at R-19, R-24. Even if EPA could invoke properly validated data from that ancient report, which it cannot, the information would be usable only to support the scoring of Site R, since there is no connection to any other Area 2 site.

present evidence, which EPA admittedly has failed to do. Thus, EPA has totally failed to meet the requirements of establishing an observed release to surface water.

VI. EPA IMPROPERLY AGGREGATED AREA 2 SITES

EPA's attempt to group together five dissimilar sites in the Area 2 proposed listing package is another fundamental error, and one which is so important to the integrity of the results of the scoring that it taints and invalidates the proposal.[53]

EPA's own aggregation policy states that "[f]or purposes of the NPL . . . EPA has decided that in most cases [non-contiguous] sites should be scored and listed individually because the HRS scores more accurately reflect the hazards associated with a site if the site is scored individually." 48 Fed. Reg. 40,658, 40,663 (Sept. 8, 1983). The courts have gone further, and have held that EPA has no authority to include in a listing a site that would not individually qualify for listing. *Mead Corp. v Browner,* 100 F.3d 152 (D.C. Cir. 1996). Moreover, courts have disagreed with the application of EPA's aggregation criteria, precluding the aggregating of non-contiguous sites that involve multiple waste generators, different kinds of wastes, different PRP's and different likely remedies. *See, e.g., Linemaster Switch Corp. v EPA*, 938 F.2d 1299, 1309 (D.C. Cir. 1991). In its Area 2 proposal, EPA has violated these requirements by grouping not only dissimilar sites, but sites that would not individually rise above the listing threshold, in an attempt to surmount scoring difficulties with each individual site.

For the Area 2 sites, EPA has failed to include its rationale for aggregation in an aggregation memorandum, which the HRSGM notes must be included where non-contiguous sites are to be treated as a single site. HRSGM at 30. Impermissibly, commenters are therefore left simply to guess at EPA's rationale for aggregation.

The Area 2 sites do not meet the criteria for aggregation. Except for Sites R and Q, they are non-contiguous. They contain wildly different wastes from a great number of PRP's. EPA claims Site O contains wastewater treatment plant sludge residue derived from decades-long processing of a long list of area industry and municipal contributors (though only metals — vanadium and manganese were documented in the HRSDR). Site Q at one time contained municipal trash, construction debris, chemical wastes, medical wastes, fly ash and drums, among other things), again from a wide variety of sources and PRP's. Capped Site R allegedly contains only Monsanto waste. Sites S and P apparently contain mixtures of waste from multiple parties. Two sites — R and Q — are located on the west, or river side of the levee, and represent very different

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[53] An extensive factual discussion evaluating aggregation factors against the character of the Area 2 sites is contained in Exhibit 5 at 2-11. The remaining discussion in this section presents a brief summary of that discussion, and outlines EPA's failure to comply with other aggregation requirements, notably court decisions (e.g., *Mead*) restricting EPA's use of aggregation techniques.

potential issues, requiring different remedial steps from the sites located on the east side of the levee. Two sites are capped: R and O. One site (Q) has been twice subject to removal actions. One site qualifies for inclusion in a RCRA corrective action program (R), although EPA has unaccountably denied its inclusion in that alternative ongoing remedial program despite including other Krummrich plant facilities — including a strip of land on the river side and adjacent to Site R.[54]

The existence of a number of other contaminated sites in the immediate area of Area 2 which EPA has without explanation not chosen to aggregate with the Area 2 sites further condemns EPA's aggregation attempt as arbitrary and capricious action without justification. Over the course of the last twenty years, EPA has investigated and explored various combinations of sites for inclusion in a Sauget Area Two grouping,[55] obviously straining to find a set of sites that when scored together would overcome the listing difficulties associated with scoring each site individually.[56]

There is simply no justification for aggregating these separate sites, nor any reason for EPA to avoid what the law requires – that each site be separately scored and individually meet the listing threshold. EPA's attempt to escape or gloss over the necessary listing requirements with generic claims that an undifferentiated contaminated groundwater plume exists does not excuse EPA's failure to demonstrate that each of these sites poses a sufficient risk to be placed on the NPL.

VII. EPA IMPROPERLY FAILED TO INCLUDE THE EFFECTS OF RISK REDUCTION ACTIVITIES AT AREA 2 SITES IN ITS LISTING PROPOSAL

In calculating the scores for the Area 2 sites and in deciding to propose the sites for listing, EPA failed to include the effects of a number of risk-reducing activities, both those already completed, as well as several to which PRP's are legally committed. These activities have the effect of greatly reducing the relative risk of these sites to public health and the environment. The goal of the NPL listing process is to select only those sites which pose greatest risk to human health and the environment, and to recognize efforts to reduce risk in the scoring exercise so that scarce agency resources are not expended on sites that do not represent current high priority threats.

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[54] *See* Footnote 15.

[55] In 1991, the sites considered together by IEPA for EPA were O, Q, R, the Bliss Waste Oil site, and the Route 3 Drum Site. Sites P and S were not considered. Ref. 6 at 2-1 to 2-8. In 1988, IEPA grouped Sites O, P, Q and R. Ref. 7. The sizes of several of the included sites were also changed over time. None of these alterations were explained by EPA in the listing package.

[56] Indeed, the inclusion of Site S seems an afterthought, has little factual justification, and is not at all linked to the other sites.

In failing to include the effect of two Site Q removal actions or to include the effect of the legal commitment of a group of Area 2 PRP's to proceed with an RI/FS for the sites, the Area 2 scoring and listing proposal contradicts EPA's common sense Superfund reforms. EPA, on October 2, 1995, announced that as part of Superfund reforms designed to "make smarter cleanup choices that protect public health at less cost," EPA was revising its policy to take into account current or recent response actions when listing a site on the NPL. *See EPA Fact Sheet on Administrative Changes to be Implemented to Reform Superfund Program* (Oct. 2, 1995), *reprinted in* 191 Daily Env't Rep. (BNA) E-1 (Oct. 3, 1995). *See also* Memorandum from Stephen D. Luftig, Director, EPA Office of Emergency and Remedial Response, to Jerry Clifford, Director, EPA Office of Site Remediation Enforcement, regarding Superfund Reforms Implementation Plan (Dec. 6, 1996), *reprinted in* 239 Daily Env't Rep. (BNA) E-1 (Dec. 13, 1995).

The purpose of this reform was to "provid[e] incentives for voluntary cleanup, and encourag[e] reuse or redevelopment of the property." *Id.* at *EPA Fact Sheet.* In particular, this reform was "designed to eliminate disincentives for early response actions by . . . private parties at sites being considered for the NPL . . . ." *Guidance Due On Response Actions Before Listing of Contaminated Sites*, 27 Env't Rep. (BNA) 451 (June 14, 1996).

The consideration of risk reducing activities – and, thus, actual site conditions – would have a significant effect upon the listing package scores. For example, when the scoring is amended to take account of the 1999-2000 removal action in Site Q (Ref. 8),[57] EPA allegations of a directly observed release at Site Q would be flatly contradicted, since EPA has relied upon sampling results from drums removed in this action to establish the release, as well as the 1994 sampling results from soils and other media which were in all likelihood also removed, either in the 1995 or 1999 removal action.[58] HRSDR at 34.

Also of great importance to the legitimacy of EPA's listing proposal are the additional multiple agency actions and PRP activities completed or pending within Area 2. As in the case of the Area 1 sites, Area 2 sites have been subjected to almost constant agency scrutiny since the 1970s, and effective action to address Area 2

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[57] This action addressed 25 acres of contamination and removed 17,032 tons of waste from the site and 3271 drums. Ref. 8, Executive Summary. The intent of this action was obviously to substantially reduce site risks as well as waste volumes. This removal action followed one carried out by EPA in 1995. *Id* at 2.

[58] Again, the lack of a sampling location map associated with the 1994 sampling program (Ref. 25) makes it impossible to tell where these samples were taken. EPA does not even mention the 1995 removal in the HRSDM, and no further information on that removal, other than the brief mention in Ref. 8 (at 2) is in the record.

contamination without reliance on the listing process is now taking place. As noted previously, in June 2000, EPA issued Special Notice of Liability Letters to almost 100 Area 2 PRP's, requesting that an RI/FS be undertaken for Area 2 sites. A group of 16 companies responded (The Sauget Area 2 Sites Group, or SA2SG) positively. EPA then negotiated an administrative consent order with the SA2SG, committing the group to underwrite the RI/FS, which will include extensive sampling and human health and ecological risk assessments. In addition, extensive sampling and analysis of Area 2, including a regional groundwater study, is being conducted by Solutia under a RCRA corrective action consent order applicable to the Krummrich plant and allied facilities,[59] and an expedited FS for the vicinity of Site R is in process. The overall effect of these activities in the remedial stages will be a very substantial reduction in any potential risk from Area 2, and eliminates the need for and justification of the economically drastic act of an NPL listing.

Finally, and perhaps most important, the human health and environmental risks EPA claims are posed by the Area 2 sites are in fact insignificant. EPA's principal argument and the concern underlying the listing package, is that very persistent and bioaccumulative substances—like PCBs and pesticides—threaten human health and the environment, through exposure of wildlife and the build-up of these substances in fish flesh. This risk is simply not present, based upon recent risk assessment analyses based upon Mississippi River sediment and fish flesh sampling results.[60]

VIII. THE TARGET FINDINGS (FISHERIES, SENSITIVE AREAS, WETLANDS) ARE UNSUPPORTED AND INVALID

EPA's scoring depends heavily upon findings that a fishery and environmental targets exist within Area 2. These findings are not supported in the record, and are based upon inadequate, faulty, and dated information. Removing or correcting these findings will cause the scores for each separate site, and for the sites as an aggregated entity, to drop well below the HRS listing threshold.

A. There is no documented fishery.

EPA states that the "[f]ood chain threat is being scored because people have been known to fish in the vicinity of the site." (Ref. 6, p. 5-5). The reference cited relies upon a 1991 IEPA screening site study of Area 2 sites, which recites only that "according to the IDOC", the Resource Inventory of the Mississippi River shows fishing areas at river miles 178-162. The actual direct reference is not included, nor is a citation to the reference included in bibliography of Reference 6 (Ref. 6 at 6-1 and 6-2) or otherwise in the Record.

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[59] *See* Footnote 15.

[60] Exhibit 5 at 30-35.

The only other purported support offered in the record for the existence of a fishery is in Reference 28, a handwritten record of a short, cryptic conversation between an employee of the IEPA, pointedly attempting to establish the existence of a fishery, with a Captain Ottis of the IDNR. Captain Ottis' credentials or background are not stated anywhere in the record. Nowhere does the record document that Captain Ottis ever fished in this area, knows anything about fishing in this area, or is qualified to serve as the foundation for a NPL listing with devastating consequences for a local community. The conversation report records that the IEPA agent stated to Captain Ottis that IEPA "needs to document that the Mississippi River is fished by people 1 mile south of the Poplar Street Bridge." Having been told exactly what IEPA wanted to hear from him, Captain Ottis reportedly replied that "the entire Mississippi River is fished by people." Pressed further to confirm that the fished area includes the "1 mile segment south of the Poplar Street Bridge on the Illinois side," the Captain reportedly answered, "Yes, it may not be as fished as other areas, but it is bank-fished." In fact, contrary to EPA's source, the area of the Illinois bank within one mile south of the Poplar Street Bridge, claimed by Captain Ottis, after prompting, to be the site of fishing, is steep, dangerous, and not accessible for bank fishing.[61]

The HRSGM requires that "[t]o establish a fishery, document that human food chain organisms are present and that people fish in the surface water body." HRSGM at 305. The Manual also requires EPA to collect evidence to document *both* "[h]uman food chain organisms are present in the surface water body" and that "[s]ome attempt has been made to catch those human food chain organisms." HRSGM at 294. "Useful sources of information include state or local fish and wildlife agencies, local bait and tackle shops, visual observation during the SI of individuals fishing or of past fishery activity (e.g., fishing lines and hooks left behind near the surface water body)." HRSGM at 294-295.

Neither of the vague, brief and unsubstantiated references in the HRS record here establish that a fishery exists in the Mississippi River near Area 2 sites. EPA has collected none of the information required by the HRSGM to establish a fishery, despite literally decades of activities in the vicinity of the Area 2 sites by both IEPA and EPA.

B. Even if a fishery were found to exist, there is no actual contamination.

In order to establish actual contamination of a fishery, an observed release must be documented. HRSGM at 295. As set forth in Section V above, there has been no documented observed release by direct observation or chemical analysis. Hence there can be no actual contamination of a fishery.

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[61] *Id.* (includes photographs demonstrating how inhospitable this area is to fishing).

But even if it could be concluded that an observed release had occurred, which it cannot, the HRSGM requires that analytical results be collected to document that a hazardous substance has been detected in surface water samples. HRSGM at 295. The only conceivable sampling results from which this demonstration could be made are the sediment samples collected in the Mississippi River in the vicinity of Site R. HRSDR at 39-41. These were not water samples and were not validated. Even if these sampling results could be used to establish an observed release, actual contamination cannot be established. Actual contamination requires that "the fishery must be within the area bounded by an observed release and at least one of the following criteria must be met: A hazardous substance with a BPFV of at least 500 or greater is present in an observed release sample (aqueous or sediment) or by direct observation . . . ."[62] HRSGM at 298. The only hazardous substances sediment sample result from the Mississippi River which conceivably could meet sample validation requirements if essential record information were included – which it is not – is one which has a BPFV value far less than 500.[63]

C. The sensitive environments findings are unsupported and erroneous.

EPA has asserted that sensitive environments exist based upon a flawed wetland determination and incorrect findings that the area contains habitat for state and federal endangered and threatened species. HRSDR at 52, 69. The basis for these claims are found in two References (15 – habitat, and 20 – wetlands), neither of which establishes an adequate foundation for EPA's scoring of either habitat or wetland.

1. Habitat

In order to qualify as habitat known to be used by endangered or threatened species, the HRSGM requires that EPA "provide evidence that at least one member of the species is present in and is using the habitat within the TDL. Field survey evidence (not necessarily direct sightings) should be sufficient to conclude that the species would likely be found in the habitat. Note that evidence of presence but not use, (e.g., sighting and individual member of the species flying over the habitat) generally will not be sufficient." HRSGM, Appendix A at 9. The habitat findings for Sauget Area 2 are based upon a one and a half page memorandum on Illinois Department of Natural Resources letterhead which notes that it is in response to a "request for natural resource and recreational information" regarding sites delineated on a topographic map in the Sauget area. The map is not included, nor are specific locations delineated. Ref. 15 at 1.

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[62] It could also be established if a closed fishery were present or if benthic tissue samples contained hazardous substances. Neither of these conditions is satisfied here.

[63] *See* Exhibit 5. The only hazardous substance sample result that could be used, were it validated, is for chlorobenzene, which has a BPFV value of 50. *Id.* The tables setting forth the hazardous substances found in the Mississippi River sediment samples are on page 39 of the HRSDR and the BPFV values are replicated at HRSDR at 42-44.

The IDNR memo notes that, based upon several database lists, several candidate species are identified as nesting *beyond* the identified sites, but within the general Sauget area, including the bald eagle (a federal threatened species for this area) and several state endangered or threatened species. The writer concludes that, given the range and feeding habits of the bald eagle "there is a strong likelihood that this species could feed *anywhere along the Mississippi River.*" *Id.* (emphasis added). Thus, on its face, the memorandum does not provide any testimony concerning the site particularly. The author also opines that the smaller birds, nesting at some distance from the identified sites, "are known to fly considerable distances from their nesting sites to forage. Any wetland or open water system within in excess of 10 miles of their nests could serve as a feeding area." *Id.* The IDNR memo attaches a map of the nesting locations of some of the birds, but it is illegible.

This documentation is far short of what is necessary to establish habitat *known* to be used by threatened or endangered species. There is no actual sighting of the species within the relevant area; nor is there evidence of use of the area by the species. EPA cannot establish use at Sauget Area 2 by a memorandum referring only to "anywhere along the Mississippi." The original references from which the IDNR writer is quoting are not included, nor citations offered. The writer's expert or academic qualifications are not stated, although such credentials are required, since she provides expert opinions about the range and habits of the species,[64] nor is even her position in the agency identified. Information about the species' nesting sites, feeding and foraging habits are unsupported. The writer does not state that she personally observed these species at or near the site.

2. Wetlands

The wetlands determination is similarly faulty. The wetlands determination is based upon Reference 20, a memorandum prepared by an employee of the Illinois Department of Conservation almost ten years ago for "Dead Creek, near Sauget." Thus, the memorandum does not focus on Sauget Area 2. The field investigation included observation of "the Southern End of Section Q," presumably Site Q in Area 2, but on potential wetlands in Sauget Area 1. Ref. 20 at 5. There are two almost illegible maps attached to the determination, with keys which cannot be

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[64] While the HRSGM indicates a "written statement from a representative of an appropriate Federal, state, county or local agency, or from a recognized expert indicates that the area of concern is suitable habitat for and is within the *current* range of the species in question." (HRSGM, Appendix A at 9 [emphasis added]) will qualify, this memo fails on several counts. First, it is not stated that the writer has any qualifications to offer the opinions she has given, which depend on her belief about habits of the birds. Second, there is no information about whether the species are *currently* found within the specified area, nor information about when the nesting locations she has provided were observed. The memorandum does not state that the author personally observed bald eagles anywhere near the site.

interpreted from the information provided on the maps. Ref. 20 at 14, 15. There is no definition of the area within Site Q that the author viewed or considered wetland. The individual data form that refers to the "Southern end of Q" (Ref. 20 at 12) is not filled out completely, concludes that the plant community is a wetland, but the percentage of wetland plants, and the ultimate opinion about whether the "hydrophytic vegetation criterion is met," critical determinants of wetland status, [65] are left blank. *Id.* The report notes that the ground is not inundated and saturated only "in places" but the soils are on the "hydric soils list." EPA concedes that the areas it has identified as wetlands are presently dry. HRSDR at 69.

From this sketchy report about wetlands on only the southern end of Site Q, with no information about where the delineated area begins and ends, EPA apparently makes the quantum leap to concluding that large portions of Site Q are wetlands, despite conceding that the area is currently dry—thus the finding is unsupported by the record. HRSDR at 52, 69. Moreover, EPA states that it bases its environmental threats targets finding upon "wetlands located within source 4." *Id.* There were no wetlands purportedly found within Source 4 — only at the south end of Source 3." Ref. 20. Thus, the documentation references in the record are themselves internally inconsistent and should be disregarded.

D. Even if sensitive areas were found to be present, they are subject only to potential, not actual contamination, and the scores are grossly inflated.

As illustrated in previous section V, there are no observed releases within Area 2, and any sensitive areas which are determined present are subject, at best, only to potential contamination, which reduces the sensitive area target scores significantly. *See* HRSGM at 338-342, 325-329.

IX. EPA USES EXCESSIVE WASTE QUANTITY FIGURES AND INCORRECT WASTE IDENTITIES THAT, WHEN CORRECTED, GREATLY REDUCE THE SCORE OF AREA 2 SITES, INDIVIDUALLY AND IN THE AGGREGATE

EPA erred in calculating the Waste Characteristics Factor Value for Area 2 sites by both unjustifiably inflating the waste quantities present in Area 2 sites and by choosing an improper array of hazardous substances to determine the toxicity, persistence

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[65] The report itself notes that "In order for an area to qualify as a wetland, more than 50% of the dominant species in each community must have an indicator status of OBL (growing exclusively in wetlands), FACW (growing mostly in wetlands), or FAC (growing in wetland or upland sites). If the site does not meet this test, they are usually not considered to be wetlands." Ref. 20 at 3. The presence of hydric soils may then, under certain conditions, be used to make a wetlands determination. It is not clear from the record those conditions were satisfied.

and bioaccumulative tendency of Area 2 site waste components. The overall effect of these choices by the agency, in combination with other scoring errors, is to artificially boost the HRS score for the sites individually and collectively over the listing threshold.

A. Waste quantities are improperly inflated and incorrect calculation methods are used.

EPA erred in calculating the waste characteristics factor value for Area 2 sites by unjustifiably inflating the waste quantities of all of the sites, and by designating Source O improperly as a waste impoundment.

EPA used total area — the single least accurate and least desirable method to determine waste quantities at each site. In each case, the agency apparently used a single, old aerial photograph to derive waste quantities for each site, averaging planimeter readings to determine total area. This is the method *least* desired by the HRSGM to determine waste quantities. *See* HRSGM at 109-110. Even when multiple photographs are available that depict a site over time, the planimeter method is subject to gross errors in determining waste location boundaries. The accuracy and representativeness of the aerial photographs used is not documented. The photographs are not included in the record.

In several instances, EPA failed to use other methods for waste quantity determination preferred under EPA's own regulations. For example, the results of the 1999-2000 removal action at Site Q should have been used by EPA to reduce and more carefully delineate waste quantities and areas subject to contamination. *See* Ref. 8 at 1 ("Site Q occupies *90 acres* [the listing proposal waste quantity is based upon 225.1 acres. HRSDR at 24](emphasis added). There is no explanation of this discrepancy in the record.

EPA also denominated Site O as a waste impoundment, (without documentation), but then used total area instead of Tier C once-filled volume as the measure of waste quantity. *See* HRSGM at 106-107. Apart from the objection to calling this area an impoundment without documentation in the record, if EPA uses this identifier, it must use an appropriate waste quantity measure. If an area is denominated a waste impoundment rather than a landfill, the waste quantity based on area is enormously inflated. Evidence in the record concerning Site O does not show it to be an impoundment. Sampling included in the HRSDR to justify inclusion of Site O showed only two metals — vanadium and manganese — at very slightly elevated levels. No usable data establishing the presence of organic compounds were apparently found, as would be expected if the area was used to dry POTW sludges derived from chemical facilities. Moreover, there was evidence that the waste had been removed from Site O prior to covering, which would make the waste quantity calculation for a impoundment even more inappropriately high.

There is evidence in the record that the volume of these facilities was 64,533 cubic yards. Ref. 6 at 2-11. There is no evidence that EPA used this volume or tried to obtain any further information, drawings or specifications about these facilities from the municipality or for any other source, despite the fact that these facts were certainly available. *See also* Ref. 7 at O-1 to O-10, containing a 1988 recommendation in an IEPA report that additional information on these facilities be pursued.

Similarly, there is information in the record about waste volumes at Sites Q and R. Ref. 6 at 2-11 and 2-12, which EPA chose not to use (contrary to its regulations) in favor of the quick and easy — and inaccurate—over calculation supplied by the aerial photographic method. EPA failed to follow its own regulations in applying this method.

B. EPA's uses of most highly toxic, mobile, persistent, bioaccumulative substances to calculate the waste characteristics values are invalid and improperly inflate the HRS scoring.

In virtually every case, EPA used the most toxic, persistent, and bioaccumulative substances detected in any sampling analysis, regardless of whether the sampling results were validated or otherwise legitimate for use, and regardless of whether those substances were a realistic representation of environmental contamination. While the HRS system may authorize use of the high value substances, it does not permit the use of invalid sample data.

EPA has used invalid sampling data to support the existence of several substances (e.g., aroclors, pesticides) from which critical calculations were made. As an example, EPA included high toxicity, bioaccumulative substances from the sampling of Site Q soils (Ref. 25), the year after the flood. But as explained by technical experts in the Menzie-Cura Report (Exhibit 5 at 12, 14-19), all of these data are invalid. Likewise, EPA used data from sediment sampling in the Mississippi River (Ref. 23) to establish the presence of high toxicity, bioaccumulative substances. These data are likewise invalid. *Id* at 17. Similarly, all of the groundwater sampling data from the 1999 sampling (Ref. 9) are unusable (Exhibit 5 at 17, 27-28.).

X. EPA RELIED UPON INVALID SAMPLING DATA TO ESTABLISH ALL THREE OBSERVED RELEASES AND TO SUPPORT OTHER ESSENTIAL ASPECTS OF THE AREA 2 HRS SCORING

As noted in prior sections, EPA attempted throughout the HRS package for Sauget Area 2 to use invalid sampling data to support essential findings. The validity of each of the three observed releases are voided because each depends heavily upon defective and invalid data, as well as other defects.

Eliminating these data would have a drastic effect on Area 2 HRS scoring. Moreover, the essential integrity and validity of the entire listing package is called into

question by EPA's lax treatment of data quality and reliability issues in the scoring package. The only appropriate remedy for this breach of fundamental precepts of data quality and validation must be the withdrawal of the entire listing package and the proposed listing.

XI. CORRECT SCORING OF EACH INDIVIDUAL SOURCE OR OFF THE AREA 2 SITES AGGREGATED, PRODUCES SCORES WELL BELOW THE LISTING THRESHOLD OF 28.5.

Correctly scored, the Area 2 sites do not collectively or individually exceed the HRS listing threshold. The consequences of changing EPA's erroneous scoring decisions is tabulated in the matrix attached as p. 35-39 of Exhibit 5. With the removal of EPA's observed release findings and no other changes, the score for the combined Area 2 sites as aggregated by EPA falls well below the 28.5 listing threshold, and no other finding, score or combination of scores can be increased to meet the thresholds. As demonstrated in the table below, the same result follows if the sites are disaggregated, *i.e.*, no site exceeds the listing threshold.

[illegible]	Score
If there is no observed release (and we assume the maximum "potential to release" score of 500), the overall site score for the aggregated Area 2 sites is 0.	(Aggregated) 0
If there is no observed release (and the maximum "potential to release" score is assumed), the disaggregated score for Site O is 0.	(Site O) 0
If there is no observed release (and the maximum "potential to release" score is assumed), the disaggregated score for Site P is 0.	(Site P) 0
If there is no observed release (and the maximum "potential to release" score is assumed), the disaggregated score for Site Q is 0.	(Site Q) 0
If there is no observed release (and the maximum "potential to release" score is assumed), the disaggregated score for Site R is 0.	(Site R) 0
If there is no observed release (and the maximum "potential to release" score is assumed), the disaggregated score for Site S is 0.	(Site S) 0

XII. EPA IMPROPERLY FAILED TO COMPLY WITH EXECUTIVE ORDER 12866

EPA failed to weigh the costs and benefits of listing Sauget Area 2 on the NPL, failed to identify and assess available alternatives to the proposed listing, and failed to comply with numerous other substantive and procedural requirements imposed by Executive Order 12866.[66] Had EPA performed the required analyses, EPA could not have avoided the obvious conclusion that the costs of listing Sauget Area 2 are outweighed by the negligible benefits of listing a site that is already being cleaned up by one or more private parties, an "available alternative."

E.O. 12866 applies to any proposal by a federal agency for a "significant regulatory action." See E.O. 12866 at § 6(a)(3)(A). As a first step of compliance with E.O. 12866, each agency must determine whether it believes that any proposed action is a significant regulatory action. *Id.* An agency proposal is a significant regulatory action if it "*may* . . . adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, . . . or communities." *Id.* at § 3(f)(1) (emphasis added).

EPA justified its non-compliance with E.O. 12866 by making the conclusory and unsupported statement that listing Sauget Area 2 "imposes no liability or costs." 66 Fed. Reg. at 47,615. EPA's conclusion is patently wrong and has already been contradicted by numerous court rulings, including three leading decisions by the United States Court of Appeals for the D.C. Circuit. The D.C. Circuit has ruled that placement on the NPL causes "serious costs," *B & B Tritech, Inc. v. EPA*, 957 F.2d 882, 885 (D.C. Cir. 1992), and "serious consequences," *Kent County v. EPA*, 963 F.2d 391, 394 (D.C. Cir. 1992). The courts recognize "damage to business reputation and loss of value in property, as well as other harmful consequences, when [a] site is listed . . . ." *Kent County*, 963 F.2d at 394; *SCA Serv. of Indiana v. Thomas*, 634 F. Supp. 1355, 1361-66 (N.D. Ind. 1986). In the words of the D.C. Circuit, "[t]his circuit has clearly recognized the harmful effects of being linked to a site placed on the NPL." *Mead*, 100 F.3d at 155. In view of the D.C. Circuit's unequivocal words on this subject, the EPA's casual denials of impacts are unpersuasive

NPL listing of Sauget Area 2 would destroy current redevelopment plans and opportunities in the communities of Sauget and Cahokia, harm local businesses, cause job losses, and stigmatize and devalue local properties. *See* Exhibit 6, Letters from Cahokia Mayor to EPA Administrator Whitman opposing NPL listing of Sauget Areas 1 and 2. Of particular concern, NPL listing could derail present plans to redevelop the area centered on the theme of Cahokia's rich history. Cahokia was the first permanent pioneer settlement in Illinois, founded in 1699. The Parks Air College was founded in 1927, the

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[66] Executive Order 12866 of September 30, 1993, *Regulatory Planning and Review*, 58 Fed. Reg. 51,735.

first in the nation devoted to aeronautical studies. In the early 1900s, the Cahokia airport was used by Charles Lindbergh and Amelia Earhart. The Village of Cahokia is presently negotiating a major community development project centered on the old airport and air college. This core for redevelopment is located near the Sauget Area 2 sites. Listing on the NPL could kill this project, and could severely hamper redevelopment initiatives in the area for decades. *Id.* The stigma attached to Superfund properties has already begun shadowing local property values in Cahokia and Sauget. Due to EPA's repeated proposals to list Areas 1 and 2, banks have begun to be reluctant to extend loans to homeowners. Among other things, banks fear the possibility of Superfund-liens on mortgaged properties, impaired abilities of borrowers to make loan payments, and inability to re-sell any mortgaged properties in the event of foreclosures. NPL listing at this juncture would fulfill the first step in the scenario feared by lenders and greatly exacerbate this situation.. Moreover, decreased property values caused by NPL listing would cause lowered local government property tax revenues and concomitant lowered funding for community needs.

Listing would also adversely impact local businesses, employers, and employment. Additionally, failure to proceed with the planned community development project would, of course, cut off attempts to establish new businesses in the community, to provide new services to the community, and to increase local employment.

Derailment of Cahokia's redevelopment plan would, by itself, be devastating to the community. Cumulatively, the other impacts described above could exceed even that devastation to Cahokia and Sauget. In light of the numerous legal rulings that NPL listing seriously harms local economies and communities, EPA has critically erred by not performing the cost-benefit and other analyses required by E.O. 12866.

XII. CONCLUSION

EPA cannot and should not proceed with the listing of Area 2 sites for multiple reasons, notably:

The proper HRS scoring of the Area 2 sites results in scores well below the 28.5 listing threshold, calculated separately or as aggregated by EPA.

EPA must disaggregate and score individually the Area 2 sites; when disaggregated, no individual score comes close to the listing threshold.

EPA should not go forward with the listing proposal because public health and environmental risks are demonstrably low, listing would violate EPA and Congressional listing policy and purposes, and would cause the community grave economic harm.

Before it proceeds with the proposal, EPA must obtain OMB review of the listing package under Executive Order 12866.

For all of the reasons specified in these comments and the exhibits hereto, the listing of Sauget Area 2 would be arbitrary and capricious and an abuse of discretion. Pharmacia, Solutia, Cyprus AMAX, Chemical Waste Management, and Ethyl therefore request that EPA not finalize the NPL proposal of Sauget Area 2 and that EPA remove Sauget Area 2 from the list of proposed NPL sites and from any further consideration for listing.

Respectfully submitted,

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Enclosures

Table of Exhibits

Document **Exhibit No.**